# Module I:  Setting Financial Goals And Getting Started

**Summary:** *In this lesson we will discuss how to turn $150 per month into over 1 million dollars. In order to achieve this and other financial goals, it is important to have an understanding of where you currently stand financially so you can form a plan for improving your financial readiness—and work towards acquiring that first million! The key to financial success is not making a large amount of money, but having an understanding of the fundamentals of saving and investing and taking a disciplined, consistent approach to improving your financial situation. Understanding the concept of "Compound Interest" also known as "The Time Value of Money" unleashes the true power for building wealth – everyone has the potential for becoming a millionaire. Even the smallest amount of money saved consistently and systematically can multiply beyond your expectations. In this module we will address issues related to setting financial goals and also demonstrate the power of compound interest.*

First, take some time to list what your financial goals are. Some good examples of financial goals are the following: decrease your debt, send your kids through college, save for a down payment on a car or home, or on the far end of the spectrum, become financially independent. At this point, try to attach a value for each goal and determine a target date for achieving each specific goal. Topics discussed in future modules will assist in helping you determine realistic dates for achieving your financial goals.

Once you have established your goals, the next step is to determine the resources you will use to achieve those goals. This is a two-part equation: you must first decide your current financial net worth, and, secondly, you need to have some idea what your future earnings will be (we will discuss allocation of future earnings in Module II – Establishing a Budget). Your net worth is calculated by subtracting your liabilities (what you owe) from your assets (what you own). Financial assets include checking/banking accounts, money market accounts, mutual fund positions, stocks, bonds, certificates of deposit, etc. Liabilities include "what you owe" like mortgages, credit card balances, car loans, personal loans, and education debt.

The intent of figuring your net worth is to determine what your current financial status is and what you have to work with to begin increasing your assets and decreasing your liabilities. Technically, net worth includes the market value of furniture, cars, jewelry, etc., but unless they are appreciating assets (meaning they increase in value over time) or you plan on turning these items into cash, they will not be of use in the wealth generation process we will discuss in our program. This is why we only consider "financial assets" when determining net worth. The following provides an example of a soldier's net worth calculation:

**Assets**

| | | |
|---|---|---|
| Savings Account | $1,000 | |
| Checking Account | 100 | |
| US Saving Bonds | 150 | (true value, not face value) |
| Certificates of Deposit | 700 | |
| Total Assets | $1,950 | |

**Liabilities**

| | |
|---|---|
| Credit Card Balances | $600 |
| Car loan | 1,000 |
| Personal Loans | 100 |
| Total Liabilities | $1,700 |

| | |
|---|---|
| **Financial Net Worth** | **$250** |

In this example, the soldier's net worth is $250. Knowing the makeup of your net worth will allow you to start working on establishing and securing your financial foundation (covered in Modules II-V). Once you establish the foundation, the next step will involve possible investing in "riskier" assets like mutual funds and stocks that have the potential for significantly improving your financial situation if invested in wisely and with a clear understanding of the risk involved. The decision to invest in "riskier" assets is also based on how much time you have to invest and how much you can afford to lose. Naturally, the goal is not to lose, but there is always that possibility.

## The Power Of Compounding

If you put your money in an investment with a given return and then reinvest those earnings as you receive them, the effect can be astounding over the long term. The importance of time cannot be underestimated – it is not just how much you save that counts, the amount of time that you maintain a consistent savings program makes a huge difference. **One of the most important elements in your financial plan is time.**

We cannot stress enough the power of compounding. Money that you think of as "just sitting around" can actually work for you. The strategy to follow consists of doing three things:

1. **Start Now.**

2. **Save regularly regardless of the amount of savings.**

3. **Get the highest interest rate/return for your money.**

We begin the discussion by examining the power of the time value of money when investing over long periods of time and then discuss the importance of the three-step strategy listed above.

These first three examples demonstrate how small amounts of money can grow to significant sums when given many years to compound and grow.

*The chart below demonstrates how investing $150 per month can grow to over $1,000,000 in 38 years assuming an **11 percent annual return**:*

**$150 Invested Each Month**

| Interest Rate | 10 years | 15 years | 20 years | 25 years | 30 years | 38 years |
|---|---|---|---|---|---|---|
| **11%** | $32,550 | $68,203 | $129,846 | $236,420 | $420,678 | $1,033,084 |

*The chart below demonstrates how a <u>one-time $1,000 investment</u> can grow assuming 5 and 10 percent annual returns:*

**$1,000 Lump Sum Investment**

(Invested one time only)

| Interest Rate | 20 years | 30 years | 40 years | 50 years | 60 years | 70 years |
|---|---|---|---|---|---|---|
| **5%** | $2,653 | $4,321 | $7,039 | $11,467 | $18,679 | $30,426 |
| **10%** | $6,727 | $17,449 | $45,259 | $117,390 | $304,481 | **$789,747** |

*Here is another example showing how <u>$10 per month</u> can grow to over $4,000,000 in 70 years at an average annual rate of 12%:*

**Saving $10 Per Month**

| Interest Rate | 20 years | 30 years | 40 years | 50 years | 60 years | 70 years |
|---|---|---|---|---|---|---|
| **12%** | $9,893 | $34,950 | $117,648 | $390,583 | $1,291,377 | **$4,264,343** |

Though many of us will not invest for 70 years, this example demonstrates the **<u>power</u>** of saving very small dollar amounts over long periods of time. The reason the money grows is because the interest received each year continues to earn interest on itself resulting in very large gains when given the proper time and compounding rate of return. We discuss the theory and calculations for determining future value in the appendix at the end of this module. A general rule to follow is the "Rule of 72." This rule provides an easy way to estimate how long you must hold your investment at a fixed rate of return to double the investment. Divide 72 by the percentage of the return, and you get the number of years it will take to double your money. For example, your money will double in 9 years at a return of 8% (72/8 = 9 years to double). So, if you invest $1,000, then after 9 years earning an 8% return you would have approximately $2,000. By using the actual future value formula, we can show how this results in a good approximation (for you advanced investors, please refer to the appendix for a more detailed discussion of future value):

$$\text{Future Value} = \$1{,}000 \times (1.08)^{9} = \$1{,}999$$

**First Strategy: Get Started Now.**

This example demonstrates the cost of waiting assuming you invested **$1 per day earning a rate of 12%**, compounded annually until age 65:

| | | Total at Age 65 | Cost to Wait |
|---|---|---|---|
| **Begin Saving:** | Age 25 | $296,516 | --------- |
| | Age 26 | $264,402 | **$32,114** |
| | Age 30 | $116,858 | **$179,658** |

The cost of waiting just five years results in $179,658 difference! The key point here is to begin your savings and investing program now – every day you delay will cost you money.

**Second Strategy: Save regularly regardless of the amount of savings.**

You do not have to save large amounts of money to take advantage of this principle. For example, assume you invest money used to purchase your coffee each day ($.50 per day). This table shows how that money can grow using 5 and 10 percent rates of return.

**Saving 50 Cents Per Day**

| Interest Rate | 10 years | 20 years | 30 years | 40 years | 50 years | 60 years |
|---|---|---|---|---|---|---|
| **5%** | $1,559 | $4,127 | $8,357 | $15,323 | $26,797 | $45,659 |
| **10%** | $2,065 | $7,656 | $22,793 | $63,767 | $174,687 | $474,952 |

**Third Strategy: Get the highest interest rate/return for your money.**

The following table demonstrates how the difference in rates of return or “interest rates” affects the outcome. For example, investing $1,000 at 6% for 20 years equals a future value of $3,210 (value calculated today, but looks out 20 years). Notice that investing the same $1,000 for the same time period at 12% equals $9,650. This results in over three times as much as when investing at 6% -- not double the amount as your intuition might lead you to believe. Every percentage point difference in the rate of return you get on your money results in a big difference in the final outcome. We will discuss how to get the best return for you money in later modules, but this table highlights why every percentage point of return matters.

Value of $1,000 Invested Once at Various Interest Rates
For Periods of 5 to 35 Years, Interest Compounded Annually
(All numbers are rounded to the nearest $10)

| Interest Rate | 5 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| **6%** | $1,340 | $1,790 | $2,400 | **$3,210** | $4,290 | $5,740 | $7,790 |
| **8%** | 1,470 | 2,160 | 3,170 | 4,660 | 6,850 | 10,060 | 14,790 |
| **10%** | 1,610 | 2,590 | 4,180 | 6,730 | 10,830 | 17,450 | 28,100 |
| **12%** | 1,760 | 3,110 | 5,470 | **9,650** | 17,000 | 29,960 | 52,800 |
| **14%** | 1,930 | 3,710 | 7,140 | 13,740 | 26,460 | 50,950 | 98,100 |
| **16%** | 2,100 | 4,410 | 9,270 | 19,460 | 40,870 | 85,850 | 180,310 |
| **18%** | 2,290 | 5,230 | 11,970 | 27,390 | 62,670 | 143,370 | 328,000 |

The discussions in the remaining modules will assist you in setting the foundation for taking advantage of the time value of money. It is important to create the proper foundation and then consistently work towards achieving your goals.

***Tune in next month for Module II: Establishing a Budget. This is where you will learn how to take your first step towards meeting your financial goals.***

## Appendix: Lump Sum Future Value Theory

This appendix is designed to help you understand the mechanics involved in making a lump sum future value calculation, but more importantly, to demonstrate where the power of compounding interest is derived.

The first example shows the calculation for determining the future value of a one-time \$1.00 investment, compounded annually at a 9% return. We break out the equation into its separate components to differentiate the simple interest from the compound interest. Simple interest represents what the principal (the one-time \$1.00 investment) earns, and the compound interest represents earnings from interest on the interest. This first example leads you to believe that compound interest is a small part of the return, but the next example will demonstrate the significance of compounding interest:

### Example 1:

Assume you invest \$1 for a 2-year period earning a 9% return each year.

**Terms Used in the Equation**

**$C_0$ = \$1** *(represents the amount invested or saved)*
**r = 9% or .09** *(represents the interest rate or rate of return the investment earns)*
**T = 2 years** *(represents the amount of time the money is invested and allowed to grow)*

**Future Value Formula = $C_0 \times (1+r)^T = \$1 \times (1.09)^2 = \$1.1881$**

Breaking down the equation we get the following:

$\$1 \times (1+r)^2 = \$1 \times (1+r) \times (1+r) = 1 + r + r + r^2 = \mathbf{1 + 2r + r^2}$

$\$1 \times (1.09)^2 = \$1 \times (1.09) \times (1.09) = \$1 + \$0.09 + \$0.09 + \mathbf{0.0081} = \mathbf{\$1.1881}$

**Simple Interest = 2r = 2 x \$0.09 = \$0.18**

**Compound Interest = $r^2$ = $(\$0.09)^2$ = \$0.0081**

**Total = 1.1881**

The $.18 is the simple interest ($.09 earned each year on the original $1.00 invested) and the $.0081 is the interest earned on the interest, known as the compound interest. We will show how the $r^2$, which seems insignificant in this example, is where the real money is made.

**Example 2:**

Assume you invested $1,000 in the stock market in 1926 (Standard and Poor's 500 Composite Stock Price Index). Your investment would have grown on average 11% for 73 years up to 1998. If we perform the same future value calculation and break out the simple interest from the compound interest, you will see where most of the return comes from – by far the greatest amount of return is due to compound interest!

**Original investment = $1,000**
**Rate of Return = 11%**
**Time of Investment = 73 years**

Future Value = **$1,000 x $(1.11)^{73}$** = **<u>$2,035,061</u>**

**Simple Interest = $1,000 x .11 x 73 years = $8,030**
**Compound Interest (interest on interest) = <u>$2,026,031</u>**
**Total $2,035,061**

The compound interest is the key behind building wealth. The two most important factors are time and the rate of return.